

CLAIMS

What is claimed is:

1. A cam follower having a substantially cylindrical form, with a cam engaging surface to a base of the substantially cylindrical form and a pushrod engaging surface to the other end, the cam follower being hollow and characterised in that the substantially cylindrical form tapers toward the pushrod engaging surface such that the portion of the cam follower bearing the pushrod engaging surface is substantially conical.
2. The cam follower of claim 1, wherein the portion of the cam follower bearing the pushrod engaging surface comprises a frusto conical shape.
3. The cam follower of claim 1, wherein the length of the tapering portion bearing the pushrod engaging surface is greater than 10% of the length of the cylindrical portion bearing the cam engaging surface.
4. The cam follower of claim 1, wherein the length of the tapering portion bearing the pushrod engaging surface is greater than 30% of the length of the cylindrical portion bearing the cam engaging surface.
5. The cam follower of claim 1, wherein the length of the tapering portion bearing the pushrod engaging surface is greater than 50% of the length of the cylindrical portion bearing the cam engaging surface.
6. The cam follower of claim 1, wherein the length of the tapering portion bearing the pushrod engaging surface is between 60 and 75% of the length of the cylindrical portion bearing the cam engaging surface.

7. The cam follower of claim 1, wherein the length of the tapering portion bearing the pushrod engaging surface is between 65 and 70% of the length of the cylindrical portion bearing the cam engaging surface.
8. The cam follower of claim 1, wherein the length of the tapering portion bearing the pushrod engaging surface is approximately 68% of the length of the cylindrical portion bearing the cam engaging surface.
9. The cam follower of claim 1, wherein the dimension of the diameter of the cylindrical base is between 25 and 35% of the length of the cylindrical portion bearing the cam engaging surface.
10. The cam follower of claim 1, wherein the angle subtended between a tangential plane through the wall of the cylindrical portion and a corresponding plane through the wall of the tapering portion is between 10 and 30 degrees.
11. The cam follower of claim 1, wherein the angle subtended between a tangential plane through the wall of the cylindrical portion and a corresponding plane through the wall of the tapering portion is between 15 and 25 degrees.
12. The cam follower of claim 1, wherein the angle subtended by a tangential plane through the wall of the cylindrical portion and a corresponding plane through the wall of the tapering portion is 15 degrees plus or minus 2 degrees.
13. The cam follower of claim 1, wherein the cam engaging surface is substantially flat or spherical.
14. The cam follower of claim 1, wherein the cam engaging surface comprises a roller.
15. The cam follower of claim 1, wherein the pushrod engaging surface comprises a cup.

16. The cam follower of claim 1, wherein the pushrod engaging surface comprises a ball.
17. A valve train comprising a cam follower according to claim 1.
18. An engine comprising a cam follower according to claim 1.
19. A land, sea or air vehicle comprising an engine according to claim 18.